



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/584,975	06/30/2006	Klaus Steinhauser	ZAHFRI P868US	2444
20210 7590 03/03/2010 DAVIS & BUJOLD, P.L.L.C. 112 PLEASANT STREET CONCORD, NH 03301				
EXAMINER				
KNIGHT, DEREK DOUGLAS				
ART UNIT		PAPER NUMBER		
3655				
MAIL DATE		DELIVERY MODE		
03/03/2010		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/584,975

**Applicant(s)**

STEINHAUSER ET AL.

**Examiner**

DEREK D. KNIGHT

**Art Unit**

3655

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 October 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 14, 21, 22 and 24-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 14, 21, 22, 24 and 28-34 is/are rejected.
- 7) ☒ Claim(s) 25-27 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

**Claims 29, 30 and 32** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

**Claim 29** recites, "the step of foregoing transfer of additional **motor firing which is actually carried out to the switching element** being disengaged, in the control of the pressure of the switching element being engaged." Emphasis added. It is unclear to the examiner why or how the switch element would carry out "additional motor firing".

**Claim 30** recites, "the step of either transferring additional **motor firing which is actually carried out to the switching element** being engaged," emphasis added. It is unclear to the examiner why or how the switch element would carry out "additional motor firing." It is also unclear to the examiner what is being described with the statement, "considering the additional engine firing which is actually carried out when controlling pressure of the switching element being engaged."

**Claim 32** recites, "increasing a pressure at the switching element being disengaged." This action is not shown in the drawing, and examiner is not sure if applicant is attempting to describe the action of the engaging clutch or the disengaging clutch.

It seems as though claims 29 and 30 may have been translated from the foreign application.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 14, 21, 22, 24 and 28-34** are rejected under 35 U.S.C. 102(b) as being anticipated by **POPP et al. (US 6,375,597)**.

Regarding **claim 14**, POPP discloses a method of increasing readiness of a crossover gear shift in an automatic transmission, the method comprising the steps of: attaining at least one of a snatch operation of the disengaging switching element (see Fig. 5C) and an increase of the transmission rotational speed gradient (shown in Fig. 5B) by providing a crossover gear shift switching command to the transmission (shown in Fig. 5A); transmitting a set of transmission rotational speed and a set motor torque from the transmission controller to a motor controller (POP, col. 3, lines 28-30) actuating a motor fueling (starts at time t3, see Fig. 5B) immediately after the crossover gear shift switching command (at time t1) depending upon one of a set transmission rotational speed (C, B or D is Fig. B) and the set motor torque (described in col. 5, lines 58 - 67), wherein engagement and disengagement of transmission clutches (lines in Fig. 5C and 5D) are effected by an increase in fuel supplied to the engine (Fig. 5B shows three

possibilities for the motor fueling) or a resultant increase in the motor output torque to the transmission during the gear shift.

Regarding **claim 21**, POPP discloses the step of reducing pressure, in the disengaging switching element during the motor fueling such that the opening of the disengaging switching element is accelerated (shown in Fig. 5C).

Regarding **claim 22**, POPP discloses the step of increasing pressure, in the engaging switching element during the motor fueling (shown in Fig. 5D).

Regarding **claim 24** (details similar to claim 14), POPP discloses a method for increasing a spontaneity of an overlapping shifting operation in an automatic transmission, with a command for motor firing being given either by a switch command or directly thereafter, at least one of a switching element, being disengaged, is forced open and a rotational speed gradient (turbine rotational speed) is increased by the motor firing, the motor firing occurring by setting either a rotational speed or a motor torque to be utilized by the automatic transmission, and the command for motor firing being given by a transmission controller, the method comprising the step of: carrying out the motor firing up to a maximum attainable full-load characteristic curve by setting the rotational speed and the engine torque to be utilized by the automatic transmission as a function of a desired increase in spontaneity.

Regarding **claim 28**, POPP discloses the step of forming torque signals, for either different parts of the shifting operation or the switching element being disengaged and a switching element being engaged, differently in one of a motor controller or the transmission controller, and transmitting the formed torque signals to the other of the

motor controller or the transmission controller (these "torque signals" are the different target points on each of the curves in Figs. 5B-5D).

Regarding **claim 29**, as best understood by the examiner, POPP discloses the step of foregoing transfer of additional motor firing which is actually carried out to the switching element being disengaged, in the control of the pressure of the switching element being engaged.

Regarding **claim 30**, as best understood by the examiner, POPP discloses the step of either transferring additional motor firing which is actually carried out to the switching element being engaged or considering the additional engine firing which is actually carried out when controlling pressure of the switching element being engaged.

Regarding **claim 31**, POPP discloses the step of, in addition to the motor firing, reducing a pressure at the switching element being disengaged (Fig. 5C) in order to accelerate opening of the switching element.

Regarding **claim 32**, as best understood by the examiner, POPP discloses the step of, in addition to the motor firing, increasing a pressure at the switching element being engaged (Fig. 5D) in order to reduce interruption in acceleration at a drive output of the automatic transmission.

Regarding **claim 33**, POPP discloses the step of, in addition to the motor firing, increasing a pressure at a switching element being engaged (Fig. 5D).

Regarding **claim 34**, POPP discloses a method for increasing a spontaneity of an overlapping shifting operation in an automatic transmission, the method comprising the steps of; issuing an overlapping switching command to a transmission controller

(Fig. 5A); transmitting a command from a transmission controller to a motor controller for increased motor firing directly after transmission of the overlapping switching command (Fig. 5B); setting a rotational speed and a motor torque as a function of a desired increase in spontaneity (point C, B, or D); fueling the motor depending on either the set rotational speed or the set motor torque to be utilized by the automatic transmission; firing the motor up to a maximum attainable full-load characteristic curve (one of the three curves in Fig. 5B); and at least one of forcing open a switching element being disengaged (Fig. 5C) and increasing a rotational speed gradient (turbine rotational speed) by the motor firing.

***Allowable Subject Matter***

**Claims 25-27** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

***Response to Arguments***

Applicant's arguments filed 10/16/2009 have been fully considered but they are not persuasive. Applicant argues that the Popp reference does not teach sending signals from the transmission controller to a motor controller. Examiner disagrees. Popp states in column 3, lines 22-29:

“Input variables 20 are, e.g. a variable representative of the driver's desired performance such as the accelerator pedal/throttle valve position, manual gear shift requirements, the signal of the torque generated by the internal combustion engine, the rotational speed or temperature of the internal combustion engine,

etc. **Data specific to the internal combustion engine are usually made available by a motor control unit.**" Emphasis added.

Examiner finds applicant's arguments to be unpersuasive.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DEREK D. KNIGHT whose telephone number is (571)272-7951. The examiner can normally be reached on Mon - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Siconolfi can be reached on (571) 272-7124. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/D. D. K./  
Examiner, Art Unit 3655

/David D. Le/  
Primary Examiner, Art Unit 3655  
03/01/2010